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(54) Title: PROCESSING AQUEOUS TITANIUM CHLORIDE SOLUTIONS TO ULTRAFINE TITANIUM DIOXIDE

(57) Abstract: A hydrometallurgical process is provided for producing ultrafine or nano-sized titanium dioxide containing solutions, particularly titanium chloride solutions. The process is conducted by total evaporation of the solution, above the boiling point of the solution and below the temperature where there is significant crystal growth. Chemical control additives may be added to control particle size. Nano-sized elemental particles are formed after calcination. The titanium dioxide can be either anatase or rutile. Following calcination, the titanium dioxide is milled to liberate the elemental particles and provide a high quality nano-sized TiO₂ with a narrow particle size distribution.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C01G23/053 C01B13/34 C09C1/36

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C01G C01B C09C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

WPI Data, PAJ, EPO-Internal, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2 166 126 A (MITSUBISHI MINING & CEMENT CO) 30 April 1986 (1986-04-30) the whole document	1-3, 5-11, 15-19, 21-27, 31,32
Y	GB 481 892 A (TITAN COMPANY INC.) 18 March 1938 (1938-03-18) page 2, line 47 - line 90 -/--	1-3, 5-11, 15-19, 21-27, 31,32



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 197 25 616 C (MAX PLANCK GESELLSCHAFT) 19 November 1998 (1998-11-19) the whole document	1-3, 6-8, 14-19, 22-24, 30-33
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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